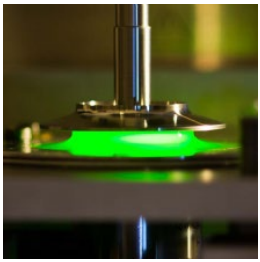
ECFP

From Rheology to Sensory Properties of Formulations

Predicting sensorial properties of formulations through rheology

We demonstrate how rheology, a quantitative measurement, may be able to inform qualitative sensory descriptors such as runniness, spreadability, smoothness and stickiness.



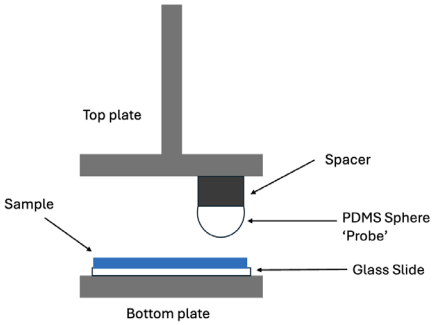
Through a combination of shear (left) and extensional rheology (right), we can attribute such descriptors with measurable parameters. For example, the viscosity, yield stress, normal stress and elasticity are all relevant and determined through rheological measurements.

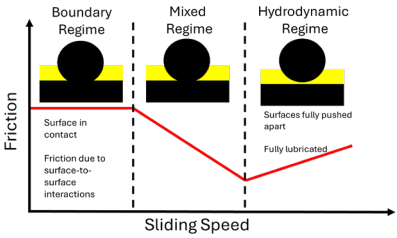
THE UNIVERSITY of EDINBURGH

Correlating triborheology to sensory profiles

Through our bespoke rheology setup, we can perform triborheology measurements to probe how it “feels” when rubbing down a sample onto a surface to mimic the application of a skin product.

The triborheometer measures frictional response as the probe (finger) is lowered to come in contact with the glass slide (skin), with the sample sitting in between. The probe then slides on top of the surface to replicate the rubbing action.





Different formulations and water content lead to different lubrication regimes. A low shear viscosity, with negligible friction, was primarily described as ‘’wet’’ and ultimately unappealing. Whilst products with higher shear viscosities with a measurable frictional response were described as ‘’silky’’ or ‘’tacky’’.

Email: ecfp-info@ed.ac.uk
www.edinburghcomplexfluids.com